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(12) UK Patent Application (19) GB (11) 2 097 160 A

- (21) Application No 8136391  
(22) Date of filing 2 Dec 1981  
(30) Priority data  
(31) 8103754  
8110547  
(32) 6 Feb 1981  
3 Apr 1981  
(33) United Kingdom (GB)  
(43) Application published  
27 Oct 1982  
(51) INT CL<sup>3</sup>  
G07F 17/34  
(52) Domestic classification  
G4V 118 AA  
(56) Documents cited  
GB A 2062923  
GB 1568522  
GB 1359852  
(58) Field of search  
G4V  
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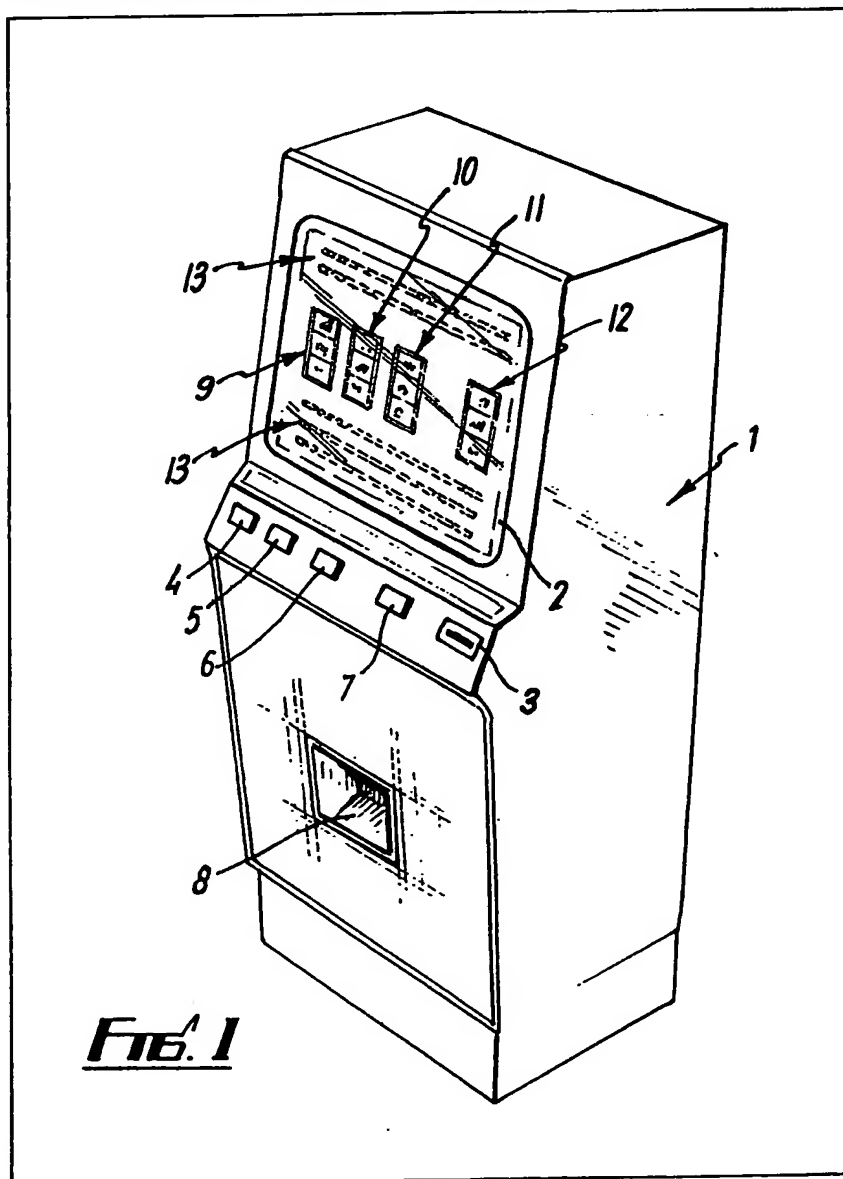
(54) Entertainment machines

(57) A coin-operated entertainment machine, particularly a fruit machine,

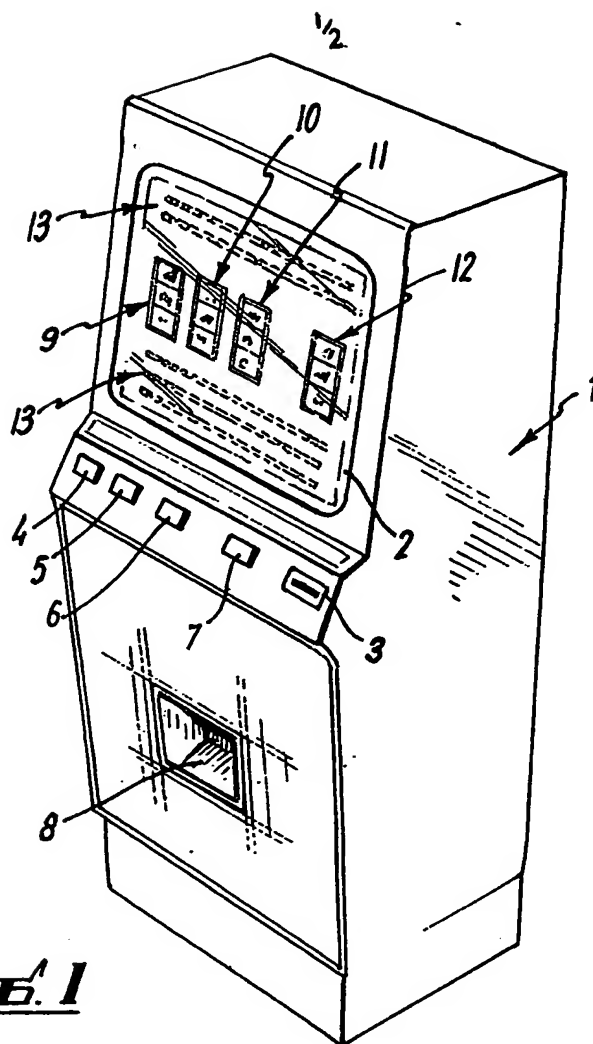
has a vdu screen on which symbols are displayed at a number of separate regions (9,10,11).

Player-operable control buttons (4,5,6) are provided for use in replacing the symbol at one region (9 to 11) with a symbol displayed elsewhere on the screen (region 12).

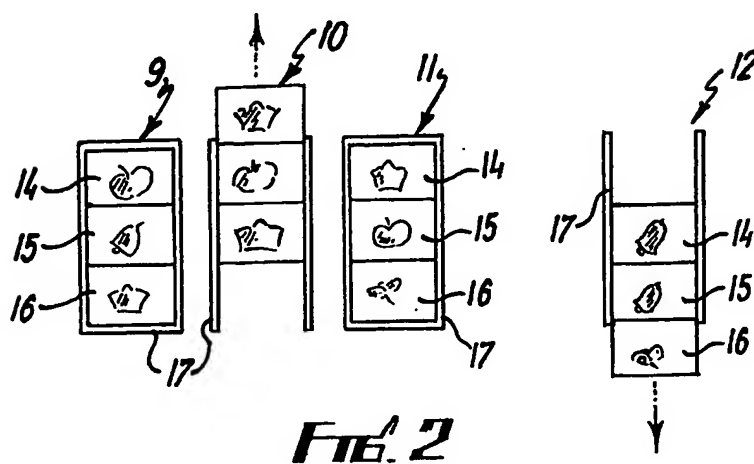
In a preferred embodiment the symbol to be replaced and the new symbol interchange positions in an operation involving simultaneous movement of the symbols across the screen.



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**FIG. 1**



## Fig. 2

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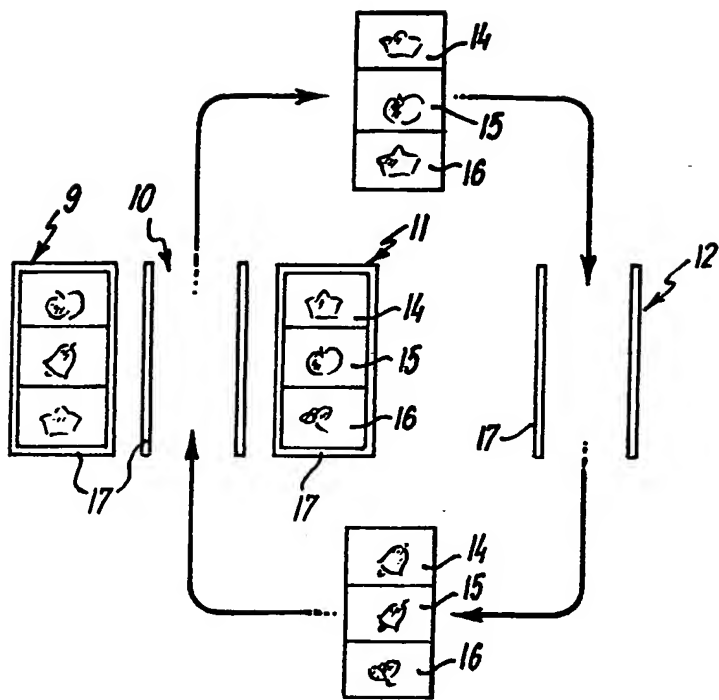


FIG. 3

## SPECIFICATION

## Entertainment machines

5 This invention relates to a coin- or token- operated  
entertainment machine of the kind (hereinafter referred  
to as the kind described) having a plurality of  
display regions and which can be operated by a  
player to produce a display of one or more symbols  
10 at each of said regions with the aim of attaining a  
winning combination thereof.

With known entertainment machines of the kind  
described which are of the coin-operated fruit  
machine type the displayed symbols are selected at  
15 random and a win indication is produced in the  
event that the resulting combination thereof is of a  
predetermined winning nature. Rotatable reels having  
symbols marked around the peripheries thereof  
are commonly used to effect such random symbol  
20 selection although it is also known to use an  
electronic visual display unit (vdu) which is operable  
to produce a display simulating such reels. A vdu  
system of this kind is described in our published  
Patent No. 1,596,363.

25 With such coin-operated fruit machines it is known  
to provide player-operable controls such as "hold"  
and "nudge" buttons which can be used at the  
beginning or end of a game to influence or modify  
the selection of the displayed symbols thereby to  
30 improve the entertainment value of the machine.

An object of the present invention is to provide a  
further kind of control which can be used to improve  
the entertainment value of an entertainment  
machine of the kind described.

35 According to the invention therefore there is  
provided an entertainment machine of the kind  
described wherein the said display regions are  
defined by regions of a vdu screen characterised in  
that the machine has a control which is operable to  
40 effect replacement of at least one symbol displayed  
at at least one display region with a symbol displayed  
on said screen other than at said display region.  
Preferably, the control is a player-operable control  
although alternatively an automatic control may be  
45 used.

With this arrangement the entertainment value of  
the machine can be improved.

In a preferred embodiment the arrangement is  
such that operation of the said control effects  
50 disappearance of the first said symbol (or alternatively  
displacement thereof from its respective display  
region) and the second said symbol is arranged  
to move across the screen to take up the position  
previously occupied by the first said symbol. The  
55 first said symbol on replacement thereof may re-  
appear in or move across the screen to the position  
previously occupied by the second symbol. Move-  
ments of the first and second symbols may occur  
simultaneously.

60 There may be a plurality of symbols at each said  
display region in which case the said control may be  
operable to effect replacement of one or more such  
symbols with a corresponding number of symbols  
previously displayed elsewhere on the screen.

65 The arrangement may be such that a symbol or

symbols can be replaced at only one or alternatively  
at some or all of the display regions, and there may  
be a single said player-operable control or alternatively  
a plurality of controls, for example one for  
70 each display region. Where symbols can be replaced  
at a plurality of display regions the player may have  
the option to effect replacement at only one selected  
display region. Alternatively, the player may have  
the option to effect replacement at any or all of the  
75 said plurality of display regions.

Further, for the or each display region at which  
symbol replacement can be effected there may be  
only a single replacement symbol (or set of symbols)  
or alternatively there may be a plurality of symbols  
80 (or sets of symbols) from which one can be selected  
by the player for replacement purposes.

Said first symbol may be arranged to be replaced  
with said second symbol taken from one other said  
display region. Alternatively said first symbol may  
85 be arranged to be replaced with said second symbol  
taken from an auxiliary region not being one of said  
display regions.

The entertainment machine of the invention may  
be a coin-operated fruit machine as described above.  
90 In this case the said replacement symbol or symbols  
may be selected at random at an auxiliary display  
region or regions. The arrangement may be such  
that the said control or controls can be operated at  
the end of a game so that the player may have an  
95 opportunity of converting a losing combination into  
a winning combination or of converting a low value  
winning combination into a higher value winning  
combination. Alternatively and in the case where  
one or more "hold" buttons are provided to hold one  
100 or more displayed symbols at the start of a game,  
the arrangement may be such that the said control or  
controls can be operated at the start of the game  
before operation of an associated hold button or  
buttons thereby to improve the chance of obtaining  
105 a winning combination in the following game.

The invention will now be described further by  
way of example only and with reference to the  
accompanying drawings in which:-

110 *Figure 1* is a diagrammatic perspective view of one  
form of machine according to the present invention;  
and

*Figures 2 and 3* are diagrammatic representations  
of display regions of the machine at different stages  
during displacement thereof.

115 The machine is a coin-operated vdu fruit machine  
of the kind described in our published Patent No.  
1,596,363 (and to which reference is made for a more  
detailed description thereof) and comprises a floor-  
standing box-structure housing 1 containing a col-  
120 our video tube the front screen 2 of which is exposed  
through an opening in a front wall of the housing. A  
conventional coin mechanism has a slot 3 which is  
mounted at the front of the housing 1 as also are  
control switches 4,5,6,7 and a pay-out chute 8. Inside  
125 the housing there is an electronic control system  
which is connected to the coin mechanism to the  
control switches 4 to 7 to the video tube and to other  
mechanisms and devices such as indicator lamps,  
game counters, pay-out solenoids and the like.

130 In the manner described in published Patent

1,596,363 the vid o tube produces at four regions 9 to 12 displays simulating the peripheries of conventional fruit machine reels and at other regions 13 decorative and/or informative displays. Three of the regions 9 to 11 are equally spaced from each other and each provides a respective display of a vertical series of three fruit-containing areas 14,15,16 contained within a frame 17, the areas of all such regions 9 to 11 being respectively horizontally aligned with each other. The fourth region 12 is spaced more widely from the other regions 9 to 11 but produces a similar horizontally aligned display of three fruit-containing regions 14 to 16 within a frame 17.

In use, after actuation of the machine by insertion of one or more coins or tokens into the slot 3, and after operation of a start switch 7 by a player, the displays at the regions 9 to 12 change in a manner simulating the rotation of reels, such change terminating (after a different period of time for each region) with a fixed display of a series of three randomly selected fruit-containing areas 14 to 16 at each region 9 to 12. At the end of the game, if the horizontally aligned central areas 15 of the three regions 9 to 11 contain a combination of fruit which is of a predetermined winning nature, the player can obtain an appropriate award (which may be a direct pay-out of coins or tokens, an opportunity to have a further game or games, etc.).

On an occasional random basis, at the end of the game the player is provided with an opportunity to improve the combination on the winning line with the aim of converting a winning combination into a further winning combination having an award of greater value or of converting a lost game into a winning game. When such opportunity arises, which is signalled by a displayed notification on the screen 2 and/or by actuation of indicator lamps, the player can operate any one of three of the switches 4,5,6, which are positioned respectively directly beneath the three regions 9 to 11. On operation of one of these switches 4 to 6 the three fruit-containing areas 14 to 16 of the pertaining region start to move bodily upwardly as indicated in Figure 2 whilst at the same time the areas 14 to 16 of the fourth region 12 start to move bodily downwardly (the frames 17 opening to permit this). These displaced sets of areas 14 to 16 then interchange positions as shown in Figure 3 to give a new fruit combination on the winning line.

The three switches 4 to 6 beneath the regions 9 to 11 can also be used as conventional hold buttons i.e. for use at the start of a game (when such facility is made available to the player) to hold the displays against changing during the ensuing game.

With the arrangement described above considerable entertainment value can be derived from the opportunity afforded to the player to improve or modify the fruit combination obtained on the winning line.

It is of course to be understood that the invention is not intended to be restricted to the details of the above embodiment which are described by way of example only. Thus, for example, the interchange facility can be made available on a regular rather than a random basis and can be made available for

all regions as desired. Further, alternatively or additionally, the interchange facility may be made available at the start of a game in conjunction with the use of a hold facility. Still further, the symbol or set of symbols used for interchange purposes need not be provided by an auxiliary "reel" (i.e. display 12) but may comprise any other suitable form of fixed or changeable display. Moreover, it will be appreciated that it is also possible to interchange the displays 9 to 11 with each other directly or via the display region 12, if desired.

Still further, the adjustment circuit used to effect interchange of displayed symbols need not be arranged to be actuated solely by player-operable controls (i.e. the buttons 4 to 6) but alternatively or additionally may be arranged to be actuated automatically. For example, on a regular or random basis interchange of symbols from one or more of the main display regions (9,10,11) may be initiated at the start or end of a game, such interchange being of a random nature, or of a predetermined nature, or of a determined nature with the deliberate aim of achieving in so far as possible an improved combination (i.e. by converting a losing combination to a winning combination or by converting a winning combination into a higher value winning combination). In the last mentioned respect attention is directed to our co-pending Application of even date claiming priority from Application No. 8110547 and which discloses a machine which can be operated by a player at the start of a game, after actuation of a coin or token mechanism of the machine, to initiate performance of first machine operations represented by visual displays of a moving or changing nature at a plurality of display regions on the machine, such first operations terminating at random at the end of the game in a combination of fixed visual displays at such regions, and which is arranged to perform further operations resulting in a win indication in the event that said combination of fixed displays at the end of the game is of a predetermined nature, and said machine having a control device which is operable to provide a control facility to cause a fixed display at at least one said display region to change to a different fixed display as selected automatically by the machine with the aim of improving the combination of fixed displays at said display regions.

## 115 CLAIMS

1. A coin or token-operated entertainment machine having a plurality of display regions and which can be operated by a player to produce a display of one or more symbols at each of said regions with the aim of attaining a winning combination thereof, said display regions being defined by regions of a vdu screen, characterised in that the machine has a control which is operable to effect replacement of at least one symbol displayed at at least one display region with a symbol displayed on said screen other than at said display region.
2. A machine according to claim 1, wherein said control is a player-operable control.
3. A machine according to claim 1 or 2, wherein

said second symbol is arranged to move across the vdu screen into the said display region to take up the position previously occupied by the first said symbol.

5 4. A machine according to any one of claims 1 to 3, wherein the first said symbol is arranged to move across the vdu screen out of the said display region to vacate the position thereof to be taken up by the second symbol.

10 5. A machine according to claim 4, when dependent on claim 3, wherein the movements across the screen of the first and second symbols are arranged to take place simultaneously.

6. A machine according to any one of claims 1 to 5, wherein said first and second symbols are arranged to interchange positions thereof.

7. A machine according to any one of claims 1 to 6 wherein said first symbol is arranged to be replaced with said second symbol taken from one other said display region.

8. A machine according to any one of claims 1 to 7, wherein said first symbol is arranged to be replaced with said second symbol taken from an auxiliary region not being one of said display regions.

9. A machine according to any one of claims 1 to 8, wherein each said display region contains a plurality of symbols at different areas thereof and operation of said control is arranged to effect replacement of all said symbols together from one said display region with a corresponding set of symbols displayed elsewhere on said screen.

10. A machine according to any one of claims 1 to 9, which is a fruit machine and wherein said symbols are selected at random at said display regions.

11. A machine according to claim 10 wherein displays simulating the rotation of reels are produced at said display regions.

12. A machine according to claim 11, when dependent on claim 7, wherein a display simulating the rotation of a reel is also produced at said auxiliary region.

13. A coin-operated entertainment machine substantially as hereinbefore described with reference to and as illustrated in the accompanying drawings.